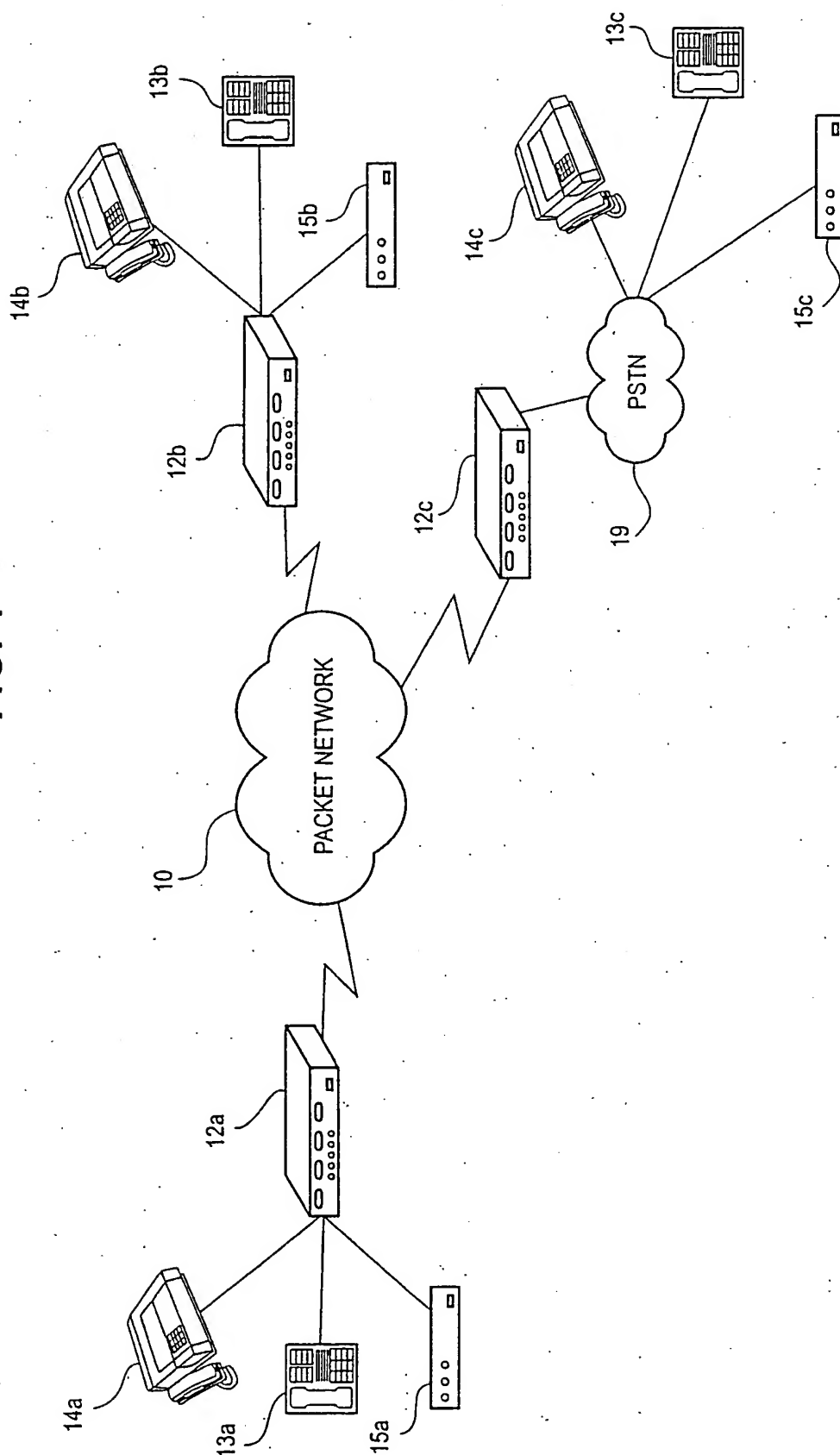


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FIG. 1



202220" 8/918001

FIG. 1A

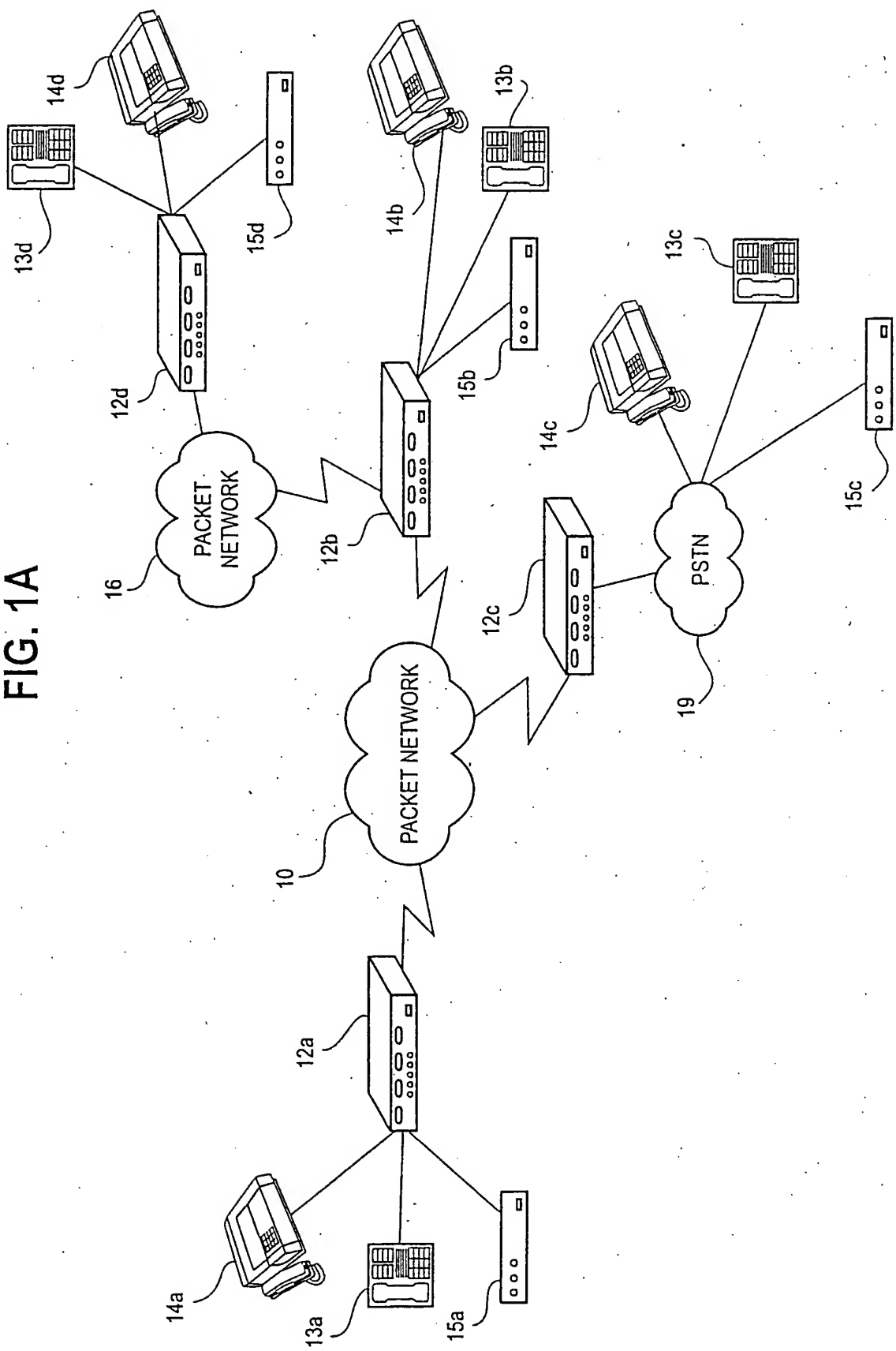


FIG. 2

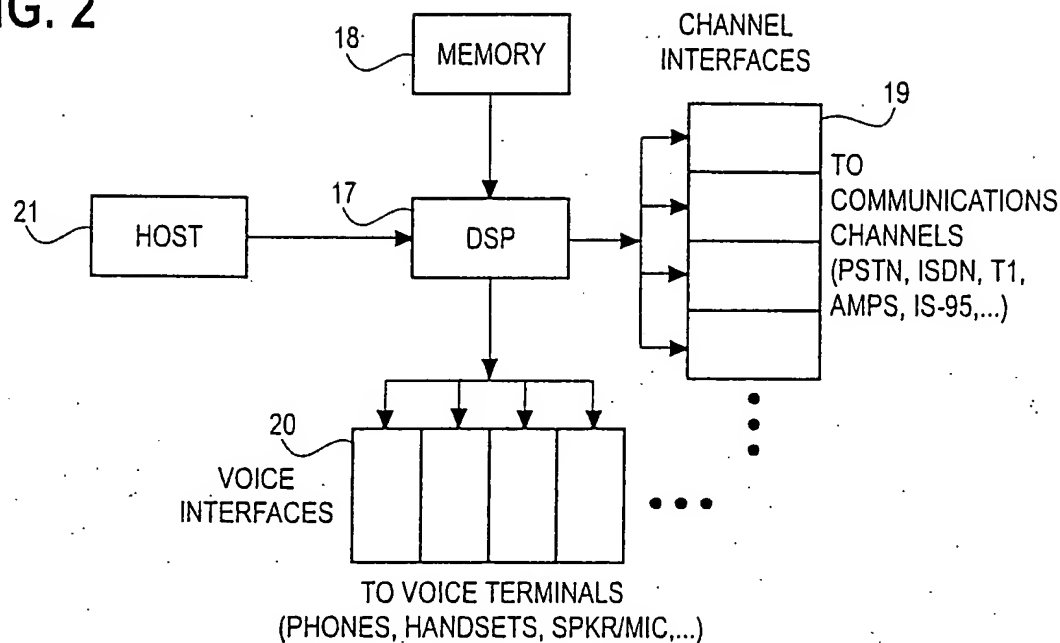


FIG. 3

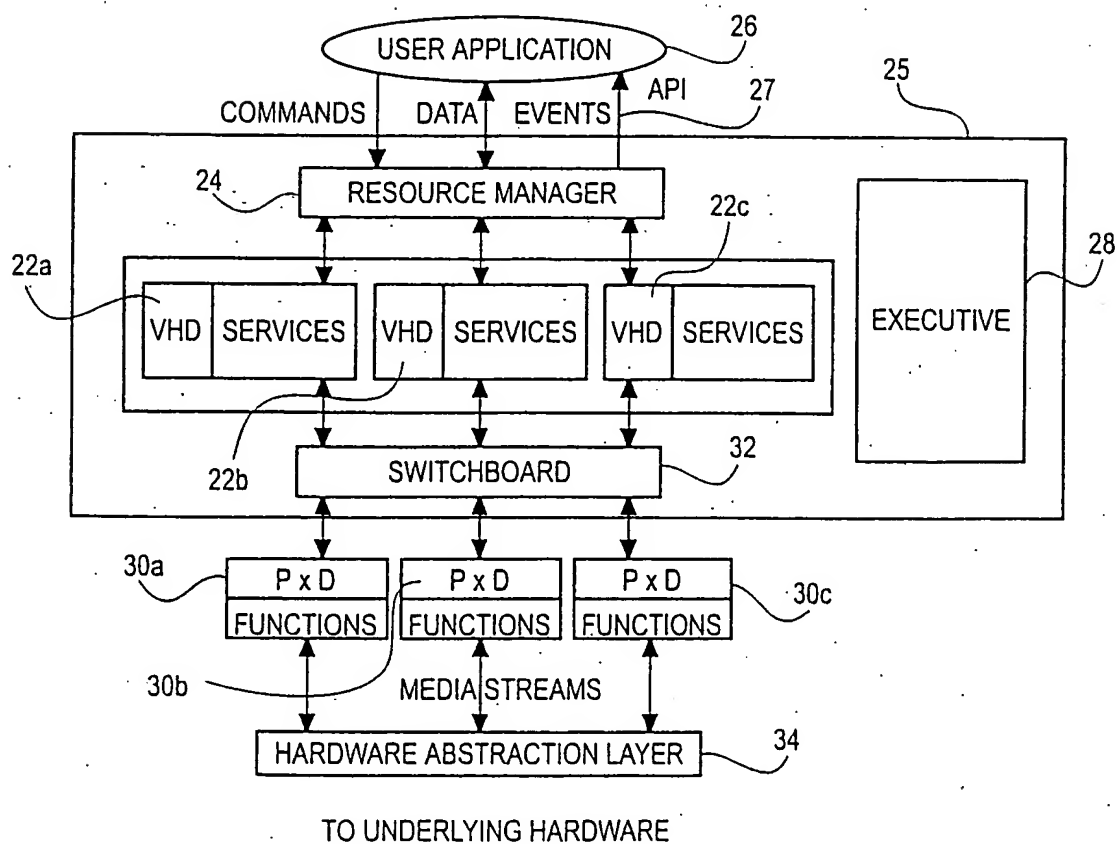
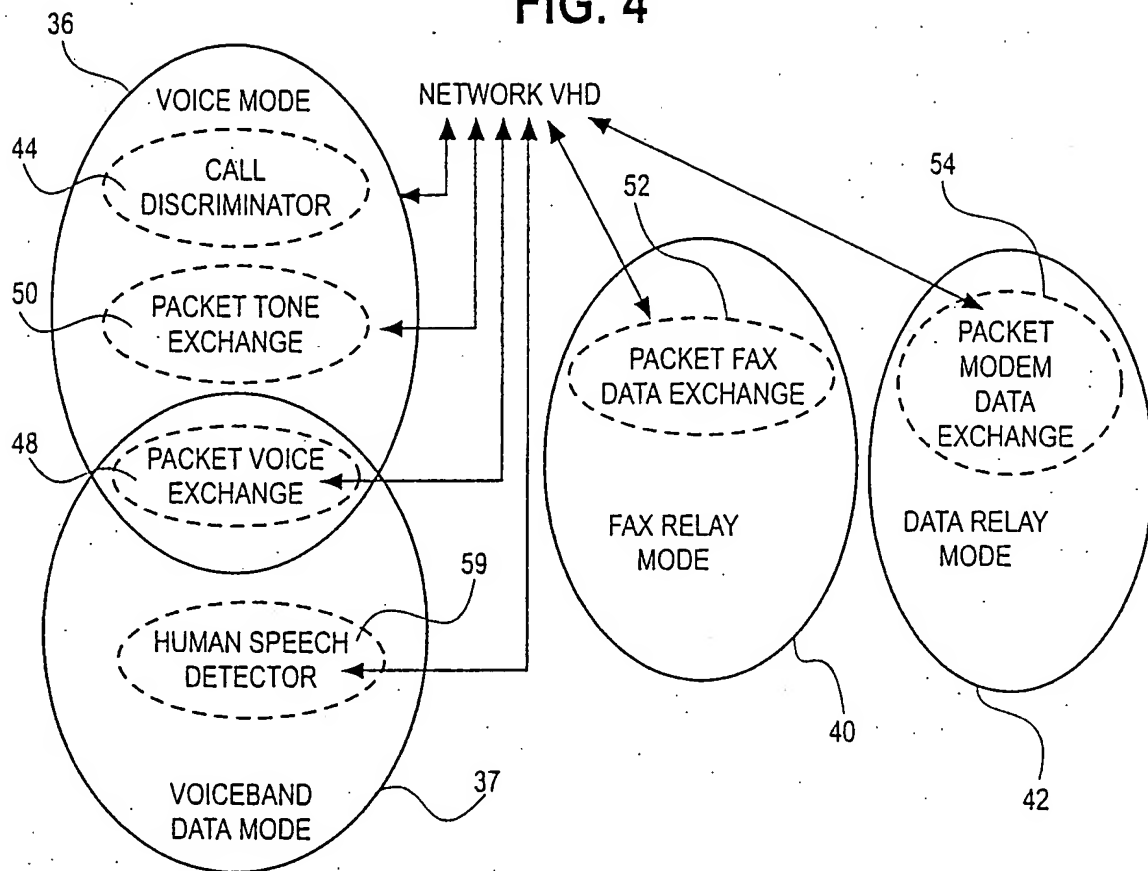
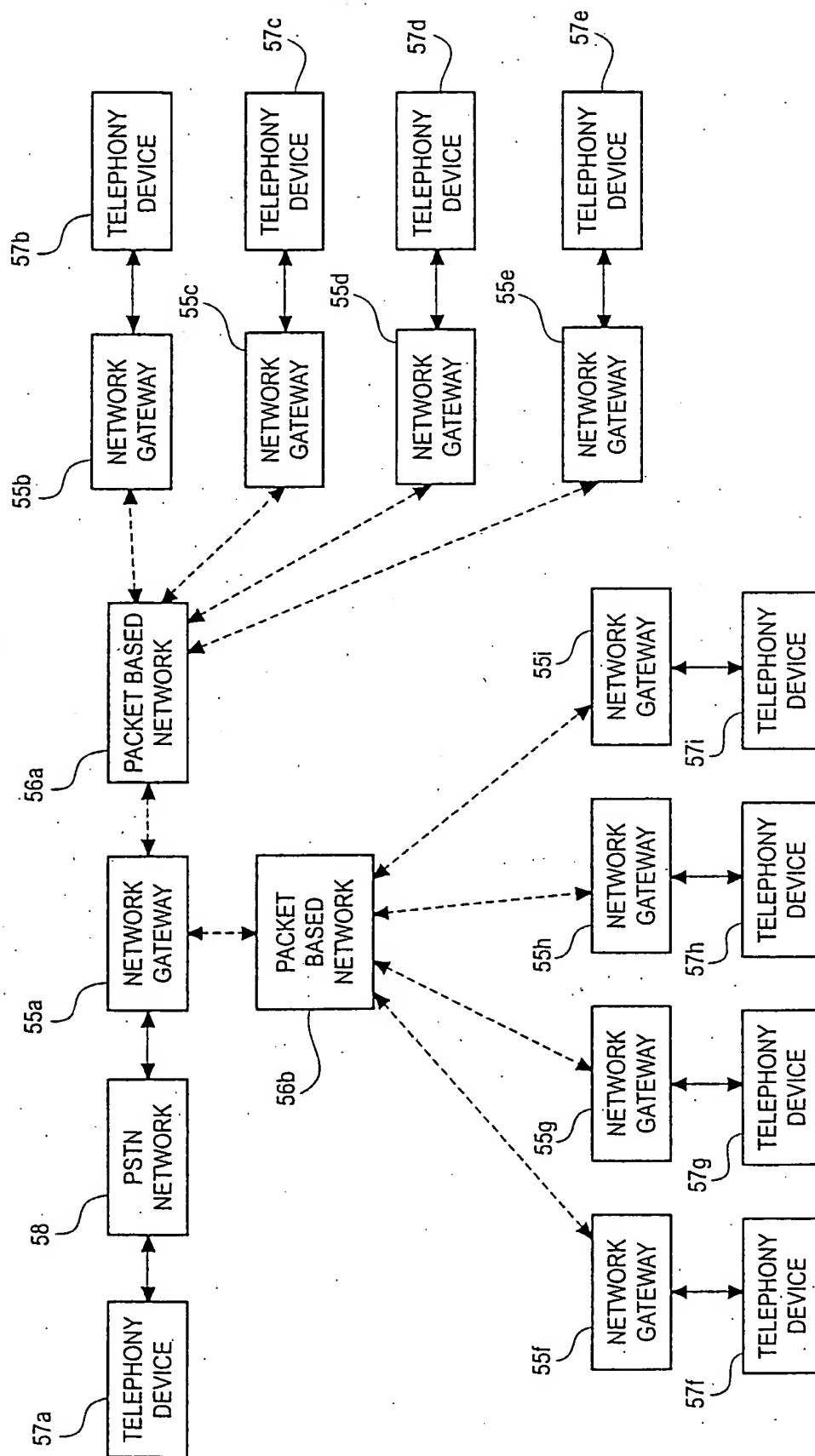


FIG. 4



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FIG. 5



The diagram illustrates a packetized voice communication system (60) with the following components and signal flow:

- Channel (62):** The external communication link.
- Packetization Engine (78):** Receives PCM IN (60a) and outputs to the Channel (62). It includes a **VOICE ENCODER (82)** and a **PACKETIZATION ENGINE (78)**.
- Depacketizing Engine (86):** Receives from the Channel (62) and outputs to the PCM OUT (60b). It includes a **DEPACKETIZING ENGINE (86)** and a **VOICE DECODER (92)**.
- Call Processing and Tone Generation:**
 - DTMF Queue (88):** Receives DTMF frames from the Packetization Engine.
 - DTMF Sync (102):** Synchronizes DTMF frames.
 - Tone Generator (104):** Generates tones based on DTMF sync.
 - Call Progress Tone Queue (87):** Manages call progress tones.
 - Call Progress Tone Sync (88a):** Synchronizes call progress tones.
 - Call Progress Tone Generator (105):** Generates call progress tones.
 - Lost Frame Recovery Engine (94):** Recovers lost frames.
- Media Handling:**
 - Media Queue (66):** Buffers outgoing packets.
 - Media Queue (106):** Buffers incoming packets.
 - Call Discriminator (68):** Discriminates between different call types.
- Voice Processing:**
 - Comfort Noise Estimator (80):** Estimates comfort noise for outgoing packets.
 - VAD (80a):** Voice Activity Detector for outgoing packets.
 - Comfort Noise Generator (96):** Generates comfort noise for incoming packets.
 - VAD (98):** Voice Activity Detector for incoming packets.
 - AGC (74):** Automatic Gain Control.
 - NLP (72):** Noise Limiting Process.
 - ECHO CANCEL (70):** Echo cancellation block.
 - Gain (108):** Overall system gain.
- Signaling and Control:**
 - Active (81):** Signal for active voice frames.
 - SID Frame (82):** Silence Insertion Descriptor frame.
 - Voice Frame (82):** Voice frame.
 - Call Progress Tone Frame (76):** Frame for call progress tones.
 - DTMF Frame (102):** Frame for DTMF tones.
 - Pre-Detect (104a):** Pre-detection signal.
 - DTMF Detect (104):** DTMF detection signal.
 - DTMF Tone On (103):** Signal for DTMF tone on.
 - Call Progress Tone On (87a):** Signal for call progress tone on.
 - DTMF Sync On (103):** Signal for DTMF sync on.
 - Lost Frame Recovery On (94):** Signal for lost frame recovery.
 - Comfort Noise On (100):** Signal for comfort noise.
 - Voice Queue (90):** Queue for voice frames.
 - Voice Synchronizer (90):** Synchronizes voice frames.
 - Voice Decoder (92):** Decodes voice frames.
 - Comfort Noise Estimator (96):** Estimates comfort noise for incoming packets.
 - VAD (98):** Voice Activity Detector for incoming packets.

To Packetization Engine

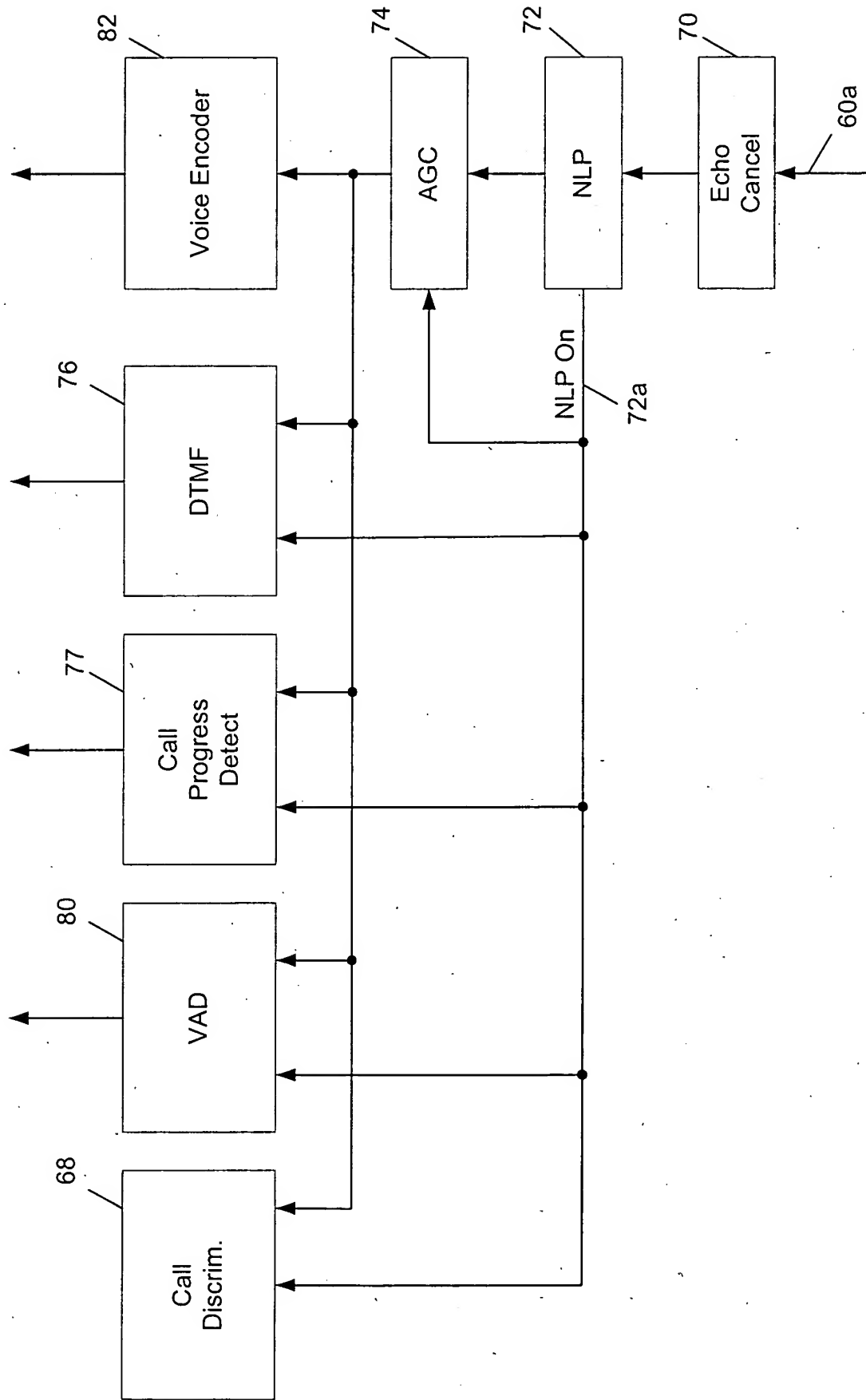


FIG. 7

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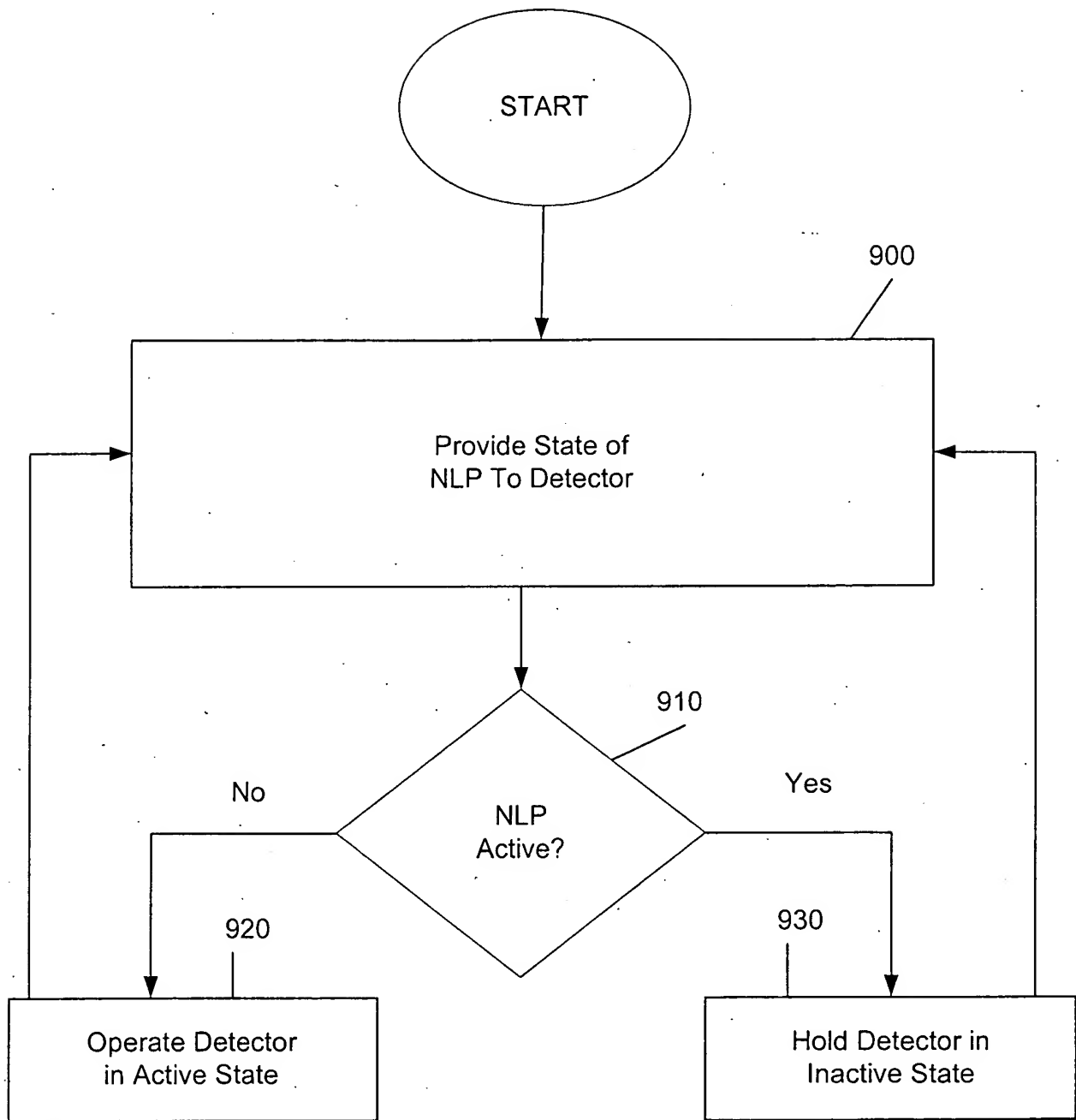


FIG. 8

202220" 8/9T800T

To Packetization Engine

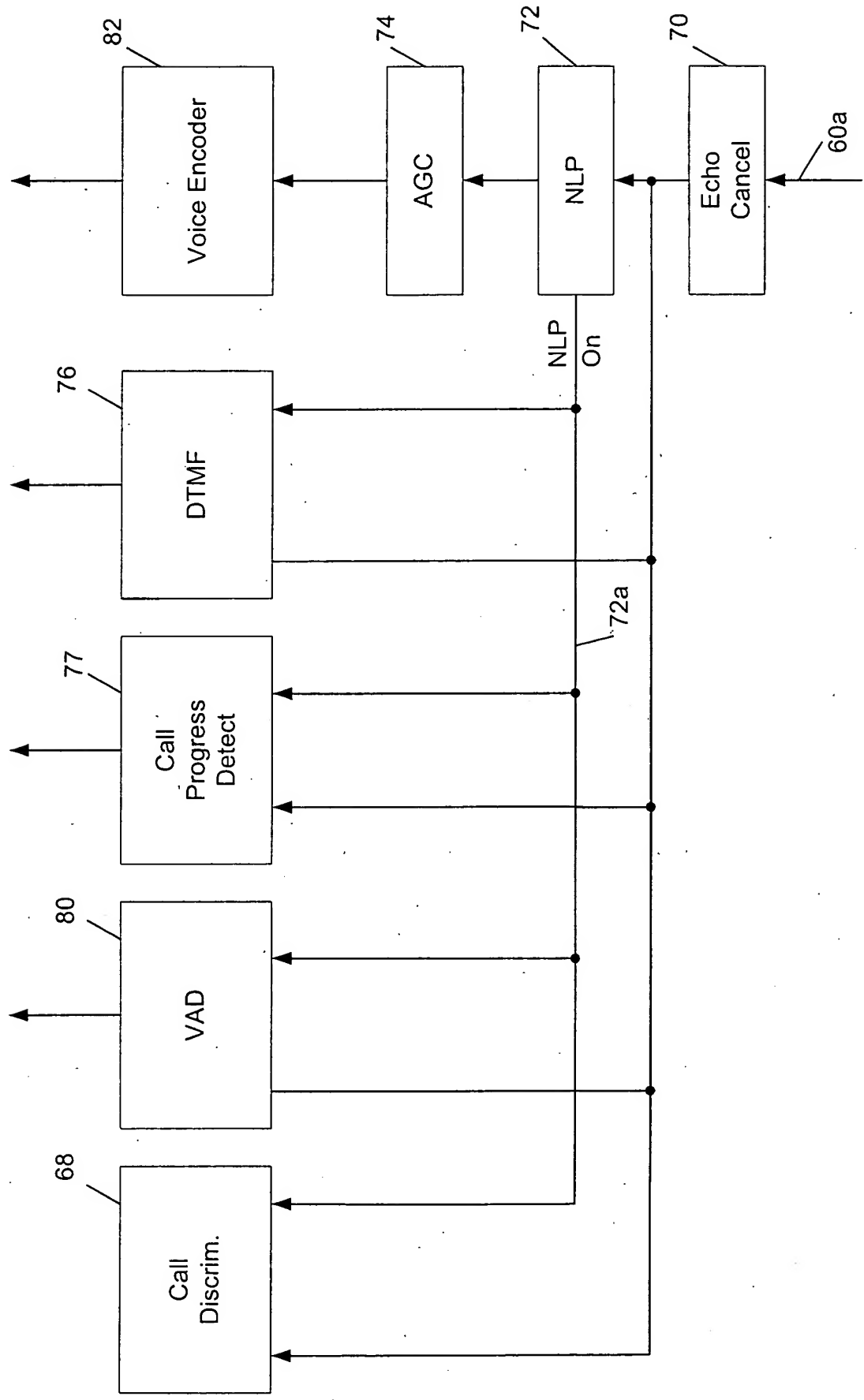


FIG. 9